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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,766	12/18/2000	Norman R. Pelton	P398 0001	4845

720 7590 07/15/2003

OYEN, WIGGS, GREEN & MUTALA
480 - THE STATION
601 WEST CORDOVA STREET
VANCOUVER, BC V6B 1G1
CANADA

EXAMINER

VALENTI, ANDREA M

ART UNIT	PAPER NUMBER
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3643

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,766

Applicant(s)

PELTON, NORMAN R.

Examiner

Andrea M. Valenti

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-14 and 20-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-14 and 20-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Knaap B.V. Fibre Neth and Substrate Research for Roses: Evaluation of Different Types of Coir, Verbondsnieuws vol. 43 (20): English abstract, Dutch 1999, one page, in view of U.S. Patent No. 3,990,180 to Bunting.

Regarding Claim 1, Van der Knaap's trademark product Fibre Neth teaches a network of thermal-sensitive fibre used as a plant growing medium. Van der Knaap's does not explicitly state a cylindrical plug of growing medium including a tree seedling with roots. However, Bunting teaches that it is old and notoriously well-known in the art to provide trees and young plants with a plant substrate plug medium (Bunting Col. 1 line 5-13) and inherently teaches a coniferous tree. It would have been obvious to one of ordinary skill in the art to shape the growing medium of Van der Knaap's into a seedling plug since the modification is merely the selection of a known material for intended use selected for its known hydration characteristics. Van der Knaap is silent on how the plug is manufactured. However, Bunting teaches that it is old and notoriously well-known in the art to manufacture plugs using thermal heat-treatment for its

polymerization effects (Bunting Col. 2 line 40-55 and claim 9). It would have been obvious to one of ordinary skill in the art to modify the teachings of Van der Knaap since the modification is merely the selection of a known manufacturing procedure selected for desired known polymerization end results to enhance root expansion through the plug.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Knaap B.V. Fibre Neth and Substrate Research for Roses: Evaluation of Different Types of Coir, as applied to claim 1 above, and further in view of U.S. Patent No. 5,942,029 to Spittle.

Regarding Claim 2, Van der Knaap teaches that the growing medium Fibre Neth has a loose growing soil mixture consisting of coconut coir and thermal-sensitive fibre, but is silent on the percentage by weight of each component. However, Spittle teaches a plant mulch mixture consisting of approximately 95% by weight natural fiber (i.e. coconut coir fibre) and 5% by weight of crimped synthetic fibers (i.e. thermal-sensitive fibre) (Spittle Col. 2 line 22-37). It would have been obvious to one of ordinary skill in the art to apply the teachings of Spittle to the production of Fibre Neth in order to provide long-lasting even hydration of the seed and seedling to maximize germination and plant growth rate as taught by Spittle (Spittle Col. 2 lines 43-52).

Claims 3, 5, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Knaap B.V. Fibre Neth and Substrate Research for Roses: Evaluation of

Art Unit: 3643

Different Types of Coir, as applied to claim 1 above, and further in view of U.S. Patent No. 5,331,908 to Loeb.

Regarding Claims 3 and 5, Van der Knaap's trademark product Fibre Neth teaches a cylindrical plug of growing medium, which is a network of thermal-sensitive fibre and inherently includes a tree seedling with roots, but is silent on a second plug surrounding the first plug. However, Loeb teaches a second cylindrical plug of a second growing medium surrounding the first cylindrical plug (Loeb Col. 4 line 5-10) Fig. 1 #16 and Fig. 2 #17) and the second growing medium has a loose growing soil mixture of peat moss and sawdust (Loeb Col. 1 line 44-48). It would have been obvious to one of ordinary skill in the art to transplant the plug of Van der Knaap's into a second plug as taught by Loeb since it is old and well-known method in the art of plant propagation to increase the size of the root containment area as the seedling grows and also to provide additional nutrient properties and protection to the plant root system.

Regarding Claim 20, Van der Knaap B.V. as modified is silent on the second plug having thermal-sensitive fibre. However, it would have been obvious to one of ordinary skill in the art to modify the teaching since the modification is merely duplicating the growing medium selection and does not present a patentably distinct limitation.

Claims 4, 7, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Knaap B.V. Fibre Neth as applied to claim 3, 5, and 20 above, and further in view of U.S. Patent No. 5,942,029 to Spittle.

Regarding Claims 4, 7, and 21, Van der Knaap as modified teaches that the growing medium Fibre Neth has a loose growing soil mixture consisting of coconut coir and thermal-sensitive fibre, but is silent on the percentage by weight of each component. However, Spittle teaches a plant mulch mixture consisting of approximately 95% by weight natural fiber (i.e. coconut coir fibre) and 5% by weight of crimped synthetic fibers (i.e. thermal-sensitive fibre) (Spittle Col. 2 line 22-37). It would have been obvious to one of ordinary skill in the art to apply the teachings of Spittle to the production of Fibre Neth in order to obtain the required absorbent properties for the growing medium to provide long-lasting even hydration of the seed and seedling to maximize germination and plant growth rate as taught by Spittle (Spittle Col. 2 lines 43-52).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Knaap B.V. Fibre Neth and Substrate Research for Roses: Evaluation of Different Types of Coir, Verbondsnieuws vol. 43 (20): English abstract, Dutch 1999, one page as applied to claim 1 above, and further in view of U.S. Patent Des. 325,714 to Karhiniemi.

Regarding Claim 6, Van der Knaap as modified is silent on a hollow cell. However, Karhiniemi teaches a tray for growing seedlings in which the application of the tray inherently performs the conventional method of forming a seedling plug by filling a hollow cell with a growing medium planting a tree seed in the hollow cell; germinating the seed into a seedling and nurturing the seedling to provide root development; after sufficient root development the of the seedling, ejecting the seedling and growing

Art Unit: 3643

medium to form a plug (Karhiniemi Fig. 1-5). It would have been obvious to one of ordinary skill in the art to modify the teachings of Van der Knaap with the teachings of Karhiniemi as an ergonomically efficient means of transporting multiple plugs at one time.

Claims 8, 9, 12-14, and 22-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Des. 325,714 to Karhiniemi as applied to claim 6 above, and further in view of U.S. Patent No. 5,331,908 to Loeb.

Regarding Claims 8 and 9, Karhiniemi as modified is silent on transplanting the first cylindrical plug into a hollow cell with a growing medium wherein the growing medium has a network of thermal-sensitive fibre; after sufficient root development of the seedling, ejecting the seedling and growing medium to form the seedling plug. However, Loeb teaches that method of transplanting a first plug into a second plug (Loeb Col. 4). It would have been obvious to one of ordinary skill in the art to modify the conventional plug method applicable to Karhiniemi to include a second plug layer of thermal-sensitive fibre since this modification is merely a duplication of steps that perform the same intended function of promoting the growth and development of the seedling. It is old and well-known in the art of plant propagation to increase the size of the root containment area as the seedling grows and also to provide additional nutrient properties and protection to the plant root system.

Regarding Claim 12, Karhiniemi as modified by Loeb teaches that the second growing medium can also be a loose growing soil mixture of peat moss and sawdust (Loeb Col. 1 line 45-48).

Regarding Claims 13, 22, and 24, Karhiniemi as modified teaches the growing medium has a network of Fibre-neth formed by filling a tray of hollow cells with the growing medium, but is silent on dipping the tray in a bath of hot water at a temperature of approximately 89 degrees Celsius, and then dipping the tray in a bath of water at tap water temperature, 5 to 10 degrees Celsius. However, it would have been obvious to one of ordinary skill in the art to dip the growing medium in hot water, approximately 89 degrees Celsius, since heat treatment is an old and well-known means to kill unwanted bacteria and micro-organisms and cooling the tray with tap water brings the soil temperature back to a level favorable for growing conditions.

Regarding Claims 14, 23, and 25, Karhiniemi as modified is silent on alternatively cascading water onto the tray to heat and cool the growing medium. However, it would have been obvious to one of ordinary skill in the art to apply cascading water to the growing seedlings since is an old and well-known method of humidity control in plant husbandry.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van der Knaap B.V. Fibre Neth as applied to claim 8 above, and further in view of U.S. Patent No. 5,942,029 to Spittle.

Regarding Claim 10, Van der Knaap as modified teaches that the growing medium Fibre Neth has a loose growing soil mixture consisting of coconut coir and thermal-sensitive fibre, but is silent on the percentage by weight of each component. However, Spittle teaches a plant mulch mixture consisting of approximately 95% by weight natural fiber (i.e. coconut coir fibre) and 5% by weight of crimped synthetic fibers (i.e. thermal-sensitive fibre) (Spittle Col. 2 line 22-37). It would have been obvious to one of ordinary skill in the art to apply the teachings of Spittle to the production of Fibre Neth in order to provide long-lasting even hydration of the seed and seedling to maximize germination and plant growth rate as taught by Spittle (Spittle Col. 2 lines 43-52).

Response to Arguments

Applicant's arguments with respect to claims 1-10, 12-14, and 20-25 have been considered but are moot in view of the new ground(s) of rejection.

Examiner cited the abstract containing Van der Knaap B.V. Fibre Neth and Substrate Research for Roses: Evaluation of Different Types of Coir, merely to establish a priority date and the constituents of Fibre Neth. Examiner was not applying the teachings of the application to roses. Previously applicant argued that Fibre Neth did not pre-date applicant's filing. Therefore, the examiner merely supplemented with an additional reference to further substantiate the date, additionally cited prior art abstract journal article *Substrate Research for Roses: Evaluation of Different Types of Coir* published in 1999. Fibre Neth is known to be manufactured in a plug shape and Bunting was cited to provide the teaching that it is old and notoriously well-known in the

art to place trees (i.e. inherently coniferous trees) in plugs (Bunting Col. 1 line 9). Furthermore, when Bunting mentions a "container" it is in reference to the plug itself i.e. the plug is the container. Bunting teaches that thermal treatment is a known plug manufacturing procedure selected for its polymerization affects. Applicant has not claimed a low or high temperature range nor has applicant claimed the absence of pressure. Examiner maintains that Bunting does in fact teach the limitations of applicant's broad claim language. Examiner also maintains that there is suggestion and motivation to combine the teachings since Bunting is teaching a known manufacturing procedure of tree plugs selected for desired known polymerization end results to enhance root expansion through the plug container.

Furthermore, examiner maintains that the teachings of Loeb are applicable and there is motivation to substantiate the modification. The Loeb reference was cited merely to teach that it is old and notoriously well-known in the art to plant a plug into a second plug. This method is an obvious method in the art even without the teachings of Loeb to support it because it is well known to place one plug into another or to place roots surrounded by soil into a larger amount of soil as the plant grows. As the roots of the plant/tree grow it requires more room to grow and develop and it would be obvious to place the root system into a larger plug container to accommodate the root growth until the plant/tree is ready to be planted out in nature.

Examiner maintains that applicant's claim language does not patentably distinguish over the teachings of the cited prior art,

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

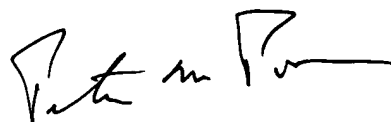
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 703-305-3010. The examiner can normally be reached on 7:30am-5pm M-F; Alternating Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 703-308-2574. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-305-0285 for After Final communications.

Art Unit: 3643

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-4357.

AMV
July 13, 2003

A handwritten signature in black ink, appearing to read "Peter M. Poon", with a stylized, cursive script.

PETER M. POON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600